

Skill Set: Preventative Maintenance: Operational Inspections

Reference: NFPA 1002, 2017 Edition - Chapter 4, Section 4.2.1 - Perform Visual and Operational Checks; 4.2.2(B) - Document the Visual and Operational Checks
 - Chapter 6, Section 6.1.1 - Perform Visual and Operational Checks on Specific Systems and Components

Candidate Equipment Required: NFPA-Complaint Personal Protective Clothing Ensemble

Evaluator Equipment Required: Aerial apparatus; Inspection checklist; Maintenance tools

Evaluator's Instructions to the Candidate

At this station, you will demonstrate performing visual and operational checks on the system components specified on the following list for a Fire Department apparatus equipped with an aerial device.

You will use the provided a checklist and necessary hand tools which may be required to perform those checks. You should correct any deficiencies noted according to your departmental policies and procedures.

Candidate MUST successfully be competent in each of the steps listed to pass this skill station.

No.	Evaluated Skill Items	First Time		Retest	
		Pass	Fail	Pass	Fail
1.	Check automotive systems:				
	a. Battery(ies)				
	b. Braking system				
	c. Coolant system				
	d. Electrical system				
	e. Fuel				
	f. Hydraulic fluids				
	g. Oil				
	h. Tires				
	i. Steering system				
	j. Belts				
	k. Tools, appliances, and equipment				
	l. Built-in safety features				

(Continued)

No.	Evaluated Skill Items	First Time		Retest	
		Pass	Fail	Pass	Fail
2.	Check Aerial Specific Items:				
	a. Cable systems (if applicable)				
	b. Aerial device hydraulic systems				
	c. Slides and rollers				
	d. Stabilizing systems				
	e. Aerial device safety systems				
	f. Breathing air systems				
	g. Communication systems				
	h. Inspect the aerial ladder sections (fly, mid(s), base)				
	i. Inspect ladder rungs				
	j. Inspect aerial waterway				
3.	Use hand tools correctly.				
4.	Recognize system problems.				
5.	Correct deficiencies noted according to departmental policies and procedures.				

Skill Set: Preventative Maintenance: Operational Inspections *(Continued)*

Fire Department Aerial Maintenance Checklist			
OK	Needs Service	Item or System	Comments
		<i>Automotive Systems</i>	
		Battery(ies)	
		Braking system	
		Coolant system	
		Electrical system	
		Fuel	
		Hydraulic fluids	
		Oil	
		Tires	
		Steering system	
		Belts	
		Tools, Appliances, and Equipment	
		Built-in safety features	
		<i>Aerial-Specific Systems</i>	
		Cable systems (if applicable)	
		Aerial device hydraulic systems	
		Slides and rollers	
		Stabilizing systems	
		Aerial device safety systems	
		Breathing air systems	
		Communication systems	
		Inspect the aerial ladder sections (fly, mid(s), base)	
		Inspect ladder rungs	
		Inspect aerial waterway	

Skill Set: Driving / Operating: Road Course

Reference: NFPA 1002, 2017 Edition - Chapter 4, Section 4.3.1 - Operate a Fire Apparatus; 4.3.7 - Operate Fixed Systems and Equipment on a Vehicle

Candidate Equipment Required: None

Evaluator Equipment Required: Aerial apparatus; Pre-determined public road course

Evaluator's Instructions to the Candidate

At this station, you will safely operate a fire apparatus through a predetermined public road course. The evaluator will ride with you and give you verbal directions along the route. You must observe and obey all applicable traffic laws and department regulations while operating the apparatus. There will NOT be any emergency driving during this skill station. Upon completion of the driving portion of this skill, you will demonstrate operation of all fixed systems on this apparatus.

Candidate MUST successfully be competent in each of the steps listed to pass this skill station.

No.	Evaluated Skill Items	First Time		Retest	
		Pass	Fail	Pass	Fail
1.	Correctly operate passenger restraint devices.				
2.	Ensure all occupants are seated and restrained prior to moving the apparatus.				
3.	Maintain safe following distances.				
4.	Maintain control of apparatus while accelerating, decelerating, and turning.				
5.	Correctly use automotive gauges and controls.				
6.	Correctly use turn signals.				
7.	Operate within all traffic laws and department SOPs.				
8.	Correctly and safely demonstrated driving the following maneuvers: a. Two left turns. b. Two right turns. c. Straight section of business street or two-lane rural road at least 1 mile long. d. Two intersections where a stop has to be made. e. Two lane changes.				
9.	Deployed, energized, & monitored system or equipment (As applicable) a. Generator. b. Floodlights. c. Air compressor. d. Air cascade system. e. Hydraulic rescue tools & power unit. f. Power reels for air, hydraulic, or electrical lines. g. Hydraulic ladder racks.				
10.	Recognize and correct system problems.				

Skill Set: Driving / Operating: Cone Course

Reference: NFPA 1002, 2017 Edition - Chapter 4 - Sections 4.3.2 - Alley Dock; 4.3.3 - Serpentine Course; 4.3.4 - Confined Space Turn-around; 4.3.5 - Diminishing-Clearance Driving

Candidate Equipment Required: None

Evaluator Equipment Required: Aerial apparatus; Traffic cones; Spotter; Closed-course driving area

Evaluator's Instructions to the Candidate

At this station, you will demonstrate driving an aerial apparatus through various exercises that simulate actual driving situations. The evaluator will give you specific instructions at the beginning of each exercise.

You will have a spotter available, if you wish. You alone will be in the apparatus during this station. If you knock down any of the traffic cones during an exercise, that constitutes a failure for that exercise.

Candidate MUST successfully be competent in each of the steps listed to pass this skill station.

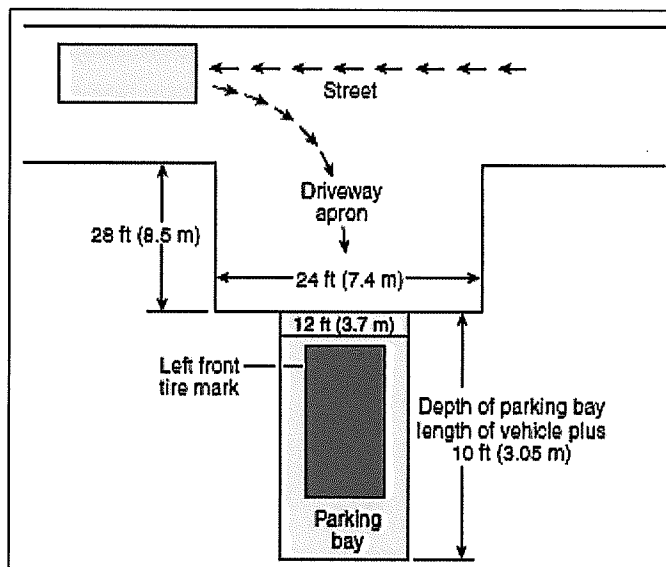
No.	Evaluated Skill Items	First Time		Retest	
		Pass	Fail	Pass	Fail
1.	Correctly operated passenger restraint devices.				
2.	Correctly use mirrors and judge vehicle clearance without knocking down cones: <ul style="list-style-type: none"> a. Back a vehicle into restricted spaces (Station Stall Parking) b. Maneuver around obstructions (Serpentine Course) c. Turn 180° within a confined space (Confined Space Turn-around) d. Maneuver in areas with restricted horizontal & vertical clearance (Diminishing Clearance) 				

(NOTE: See following pages for individual exercise descriptions)

Skill Set: Driving / Operating: Cone Course

Skill Item 3a - Station Stall Parking Exercise:

This exercise measures a driver's ability to drive past a station stall, back the apparatus into the space provided, and stop smoothly. A station stall can be simulated by arranging traffic cones as shown in the below diagram. The actual stall should be 12 ft. apart and the length will be 10 ft. longer than the apparatus used. The driver shall drive past the stall, with the stall on the left and then back the apparatus, using a left turn, into the stall. The driver will then exit the stall and the exercise shall be **repeated** with the stall on the right side, backing the apparatus using a right turn.

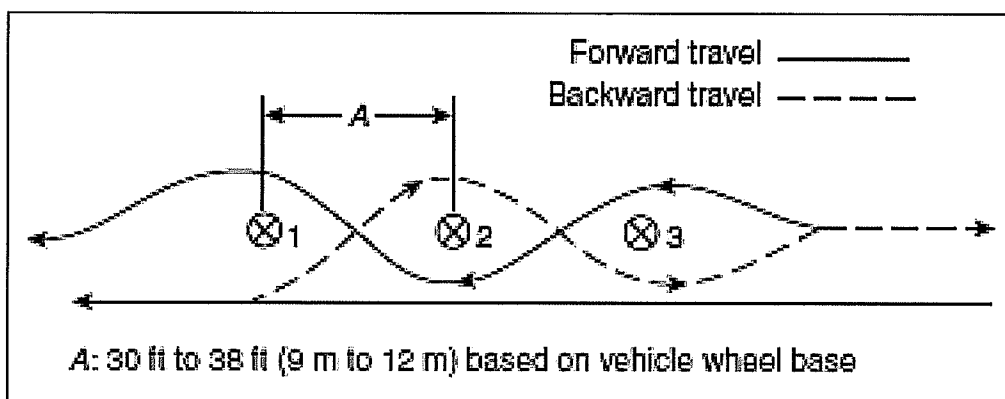


Skill Item 3b - Serpentine Course Driving Exercise:

This exercise measures a driver's ability to steer the apparatus in close limits without stopping. The exercise should be conducted with the apparatus moving **first** backward, **then** forward. The course or path of travel for this exercise can be established by placing a minimum of three markers, each spaced 38 ft. apart, in a line. Adequate space must be provided on each side of the markers for the apparatus to move freely.

The driver should drive the apparatus along the left side of the markers in a straight line and stop just beyond the last marker. The driver then should begin the exercise by backing the apparatus between the markers by passing to the left of marker No. 1, to the right of marker No. 2, and to the left of marker No. 3.

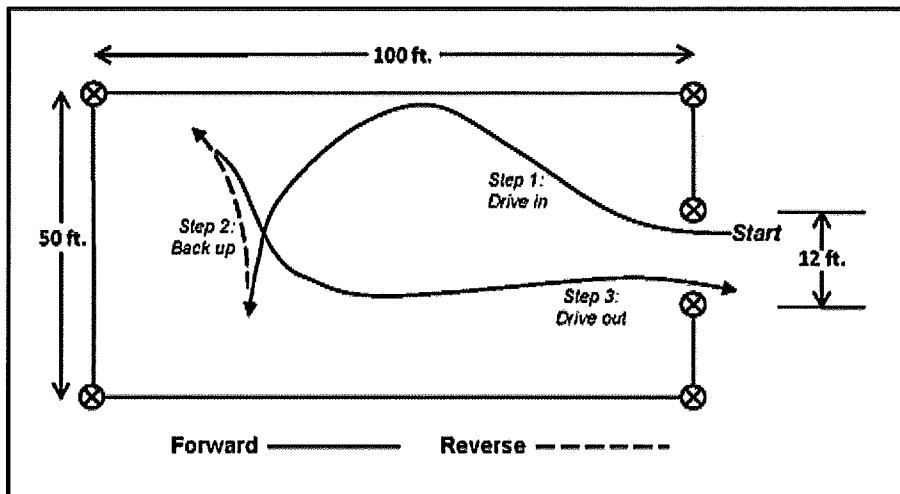
At this point, the driver should stop the vehicle and then drive it forward between the markers by passing to the right of marker No. 3, to the left of marker No. 2, and to the right of marker No. 1.



Skill Set: Driving / Operating: Cone Course

Skill Item 3c - Confined Space Turn-around Exercise:

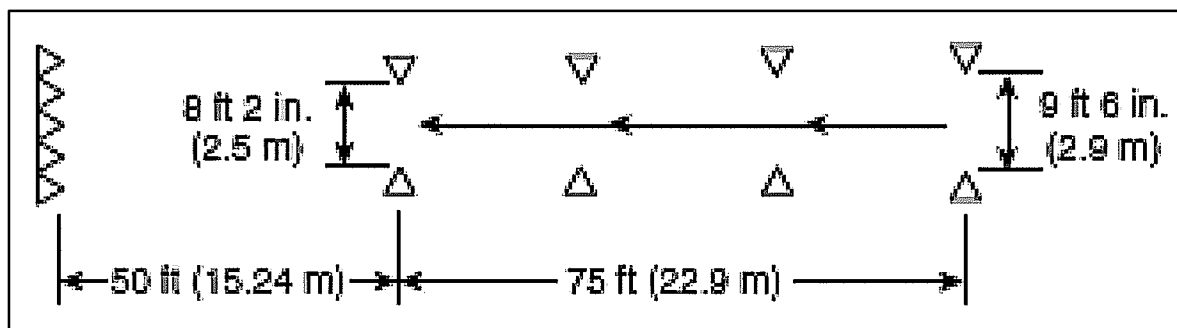
This exercise measures the driver's ability to turn the vehicle around in a confined space without striking obstacles. The turn is accomplished within an area 50 ft. x 100 ft. The driver moves into the area from a 12 ft. opening in the center of one of the 50 ft. legs, turns the vehicle 180 degrees, and returns through the opening. There is **no limitation** on the number of times the driver has to maneuver the vehicle to accomplish this exercise, but **no portion** of the vehicle should extend over the boundary lines of the space.



Skill Item 3d - Diminishing-Clearance Driving Exercise:

This exercise measures a driver's ability to steer the apparatus in a straight line, to judge distances from wheel to object, and to stop at a finish line. The speed at which a driver should operate the apparatus is optional, but it should be great enough to necessitate quick judgment.

The course for this exercise is created by arranging two rows of markers to form a lane 75 ft. long. The lane varies in width from 9 ft. 6 in. to a diminishing clearance of 8 ft. 2 in. The driver should maneuver the apparatus through this lane without touching the markers. The vehicle should be stopped at a finish line 50 ft. beyond the last marker. **No portion** of the vehicle should protrude beyond this line. (If the apparatus used for this exercise is wider than the given measurements, adjustments to the diminishing widths of each set of cones will be made based on the width of the apparatus used.)



Skill Set: Operations: Maneuver, Position and Stabilize an Aerial Apparatus

Reference: NFPA 1002, 2017 Edition - Chapter 6 - Section 6.2.1 - Maneuver and Position an Aerial Apparatus; 6.2.2 - Stabilize an Aerial Apparatus

Candidate Equipment Required: NFPA-Complaint Personal Protective Clothing Ensemble

Evaluator Equipment Required: Aerial apparatus; Multi-story training structure

Evaluator's Instructions to the Candidate

At this station, you will demonstrate maneuvering, positioning and stabilizing an aerial apparatus. The evaluator will provide you with an incident location and a situation description. You will maneuver so that the apparatus is positioned for correct aerial device deployment to perform one of the following operations:

Window Rescue | Roof Ventilation | Master Stream Operations

Once you have completed positioning the apparatus, you will then demonstrate stabilizing and leveling the apparatus in preparation for aerial device deployment.

The skill station is complete when you inform me that you are ready to deploy the aerial device.

Candidate MUST successfully be competent in each of the steps listed to pass this skill station.

No.	Evaluated Skill Items	First Time		Retest	
		Pass	Fail	Pass	Fail
1.	Determine a correct position for the apparatus.				
2.	Maneuver the apparatus into that position.				
3.	Avoid obstacles to operations.				
4.	Transfer power from the vehicle's engine to the hydraulic system.				
5.	Deploy the wheel chocks.				
6.	Stabilize the apparatus. Insert safety pins, <i>(if equipped)</i> .				
7.	Level the apparatus.				

Skill Set: Operations: Maneuver and Position the Aerial Device from Each Control Station and Using the Emergency Operating System

Reference: NFPA 1002, 2017 Edition - Chapter 6 - Section 6.2.3 - Maneuver and Position the Aerial Device from Each Control Station; 6.2.4 - Lower an Aerial Device Using the Emergency Operating System

Candidate Equipment Required: NFPA-Complaint Personal Protective Clothing Ensemble

Evaluator Equipment Required: Aerial apparatus; Multi-story training structure

Evaluator's Instructions to the Candidate

At this station, you will demonstrate maneuvering and positioning the aerial device from each control station. The apparatus will already be positioned and stabilized for aerial device deployment.

You will begin by deploying the aerial device from its bedded position at the primary control station and positioning it for one of the following operations:

Window Rescue | Roof Ventilation | Master Stream Operations

Once you have completed the initial positioning, you will move to the remote station *(if applicable)*. You will then make any final positioning adjustments to complete the operation. The evaluator will then direct you to bed the aerial device in preparation to return the apparatus to service. Finally, you will explain procedures for lowering the aerial device using the emergency operating system.

Candidate MUST successfully be competent in each of the steps listed to pass this skill station.

No.	Evaluated Skill Items	First Time		Retest	
		Pass	Fail	Pass	Fail
1.	Raise the aerial device.				
2.	Rotate the aerial device.				
3.	Extend the aerial device.				
4.	Position to a specified location.				
5.	Operate remote controls.				
6.	Unlock the aerial device.				
7.	Retract the aerial device.				
8.	Lower the aerial device.				
9.	Bed the aerial device.				
10.	Explained emergency power operations and location of equipment/switches.				
11.	Retract the vehicle stabilization system.				
12.	Transfer power from the hydraulic system back to the engine.				

Skill Set: Operations: Deploy and Operate an Elevated Master Stream

Reference: NFPA 1002, 2017 Edition - Chapter 6 - Section 6.2.5 - Deploy and Operate an Elevated Master Stream

Candidate Equipment Required: NFPA-Complaint Personal Protective Clothing Ensemble

Evaluator Equipment Required: Aerial apparatus; Designated area to flow an elevated master stream

Evaluator's Instructions to the Candidate

At this station, you will demonstrate procedures to deploy and operate an elevated master stream.

You will be required to make any hose connections to your aerial apparatus necessary in order to establish an adequate water supply. Once your water supply is established, you will deploy and operate the elevated master stream at the correct flow rate per the apparatus' manufacturer specifications.

Candidate MUST successfully be competent in each of the steps listed to pass this skill station.

No.	Evaluated Skill Items	First Time		Retest	
		Pass	Fail	Pass	Fail
1.	Position the apparatus.				
2.	Deploy wheel chocks.				
3.	Stabilize the apparatus. Insert safety pins, <i>(if equipped)</i> .				
4.	Establish an adequate water supply to the aerial apparatus.				
5.	Raise, extend, and position the aerial ladder for master stream operation.				
6.	Operate an elevated master stream at the correct volume and pressure.				
7.	Drain the waterway.				
8.	Lower, retract and bed the aerial ladder into the correct position.				